

27. The automatic drilling system according to claim 3 wherein said drill string torque regulator, comprises:

a Bourdon tube coupled to said drill string torque sensor to measure changes in drill string torque;

a flapper coupled at one end to said Bourdon tube wherein said flapper pivots about a pivot point in response to changes in drill string torque measured by said Bourdon tube; and

means responsive to the pivoting of said flapper for outputting a signal to said relay representative of changes in drill string torque.

28. The automatic drilling system according to claim 4 wherein said drill string RPM regulator, comprises:

a Bourdon tube coupled to said drill string RPM sensor to measure changes in drill string RPM;

a flapper coupled at one end to said Bourdon tube wherein said flapper pivots about a pivot point in response to changes in drill string RPM measured by said Bourdon tube; and

means responsive to the pivoting of said flapper for outputting a signal to said relay representative of changes in drill string RPM.

#### REMARKS

The specification stands objected to and claims 1-11 stand rejected under 35 U.S.C. §112, first paragraph. Applicant respectfully traverses the above objection to the specification and directs the Examiner's attention to page 35, line 32, through page 36, line 23. Applicant's automatic drilling system utilizes all four drilling parameters to control a drilling operation even though they are interrelated by selecting one parameter as the primary control parameter and then using the remaining parameters as secondary or back-up controls. Thus, the parameter set to provide primary control regulates the release of the drill string unless one of the remaining parameters reaches an undesirable level that triggers it to override the primary control and regulate the